



Status of implementation of the INSPIRE Directive – 2016 Country Fiches

COUNTRY FICHE Portugal

Introduction	1
1. State of Play.....	2
1.1 Coordination.....	2
1.2 Functioning and coordination of the infrastructure	3
1.3 Usage of the infrastructure for spatial information	3
1.4 Data Sharing Arrangements.....	3
1.5 Costs and Benefits	4
2 Key Facts and Figures	4
2.1. Identification of spatial data with relevance to the environment (step 1)	5
2.2 Documentation of the data (metadata)	7
2.3. Accessibility of the data through digital services (step 3)	9
2.4. Interoperability of spatial data sets (step 4).....	11
3. Outlook.....	12
4. Summary - How is Country doing?.....	13
Specific recommendations:	14

Introduction

The INSPIRE Directive sets the minimum conditions for interoperable sharing and exchange of spatial data across Europe as part of a larger European Interoperability Framework and the e-Government Action Plan that contributes to the Digital Single Market Agenda. Article 21 of [INSPIRE Directive](#) defines the basic principles for monitoring and reporting. More detailed implementing rules regarding INSPIRE monitoring and reporting have been adopted as [COMMISSION DECISION regarding INSPIRE monitoring and reporting](#) on the 5th of June 2009.

This country fiche highlights the progress of Portugal in the various areas of INSPIRE implementation and presents an outlook of planned actions for further improvement of the INSPIRE implementation. The country fiche includes information **until May 2016** as a summary of the information acquired through:

- the 2016 [tri-annual INSPIRE implementation report](#),
- [monitoring report](#) in May 2016,

- a [bilateral meeting](#) on the implementation of the INSPIRE Directive between the Commission and Portugal representatives.

1. State of Play

A high-level view on the governance, use and impact of the INSPIRE Directive in Portugal. More detailed information is available on the [INSPIRE knowledge base](#).

The content of the chapter is tagged according to 5 criteria of better regulation:

- **[Effectiveness]** How successful has the INSPIRE implementation been in achieving, progressing towards its objectives; progress made, gaps, what factors have influenced or why it has not yet been achieved regarding availability of services, data interoperability, sharing, data policy obstacles
- **[Efficiency]** Costs (numbers or difficulties to evaluate them); benefits (qualitative or quantitative) already visible.
- **[Relevance]** Is it still relevant to make data interoperable, remove obstacles of data sharing, drive collaboration between public services, necessary for National SDI, use cross-sector, requested by eGovernment, modernisation of public admin, etc.; support given by National Institutions for implementation
- **[Coherence]** Internal coherence of INSPIRE provisions proved by implementation; cross-border applications; coherence with other National and EU policies
- **[EU-added value]** Improvement of EU cross-border data management and use; use for environmental monitoring and reporting, use for and with Copernicus data; use cross-sector.

1.1 Coordination

- National Contact point

Name of public authority	Direção Geral do Território (DGT)
Mailing address	Rua da Artilharia Um, 107; 1099-052 Lisboa
Telephone number	(+351) 21 381 96 00
Fax number	(+351) 21 381 96 93
E-mail	Inspire@dgterritorio.pt
Website address	www.dgterritorio.pt
Contact person	Mário Caetano (10/2014 - 2015)
Telephone number	(+351) 21 381 96 00
E-mail	mario.caetano@dgterritorio.pt
Contact person substitute	Paulo Patrício
Telephone number	(+351) 21 381 96 00
E-mail	ppatricio@dgterritorio.pt

- Coordination Structure
 - DGT represents at IC, MIG-P and MIG-T
 - CO-SNIG – Conselho de Orientação do SNIG has the strategic coordination of National System for Geographic Information (SNIG), integrating 16 public authorities
 - DGT chairs the CO-SNIG Effectiveness
 - DGT has the following networks: Network SNIG (all public authorities producers and providers of GI data+ private users registered at geportal); Network of Focal Points INSPIRE (contact of public authorities producing national data sets and services); Network of Focal Points INSPIRE Core (a sub-set of the previous with public authorities formally responsible to produce national datasets and services regarding the themes of 3 Annexes); Network of Metadata Managers
- Progress
 - In 2015 improved coordination, after the previous period of Public Admin reorganisation and economic crises, with reactivation of the NCP SNIG-INSPIRE team and of the networks and Working Groups, enlarged competencies & public admin involved; Coordination body has many authorities related with environment and INS (statistics). **[Effectiveness]**

- **Restructuring of the previous Thematic Working Groups, now in-line with the EU thematic clusters, and its re-dinamization mainly towards spatial data harmonization compliancy.**
- Public consultation on SNIG and INSPIRE in 2015 and creation of Vision and Action Plan SNIG 2020.
- SNIG on the Road initiative to reinforce the regional and local involvement, going to 5 Comissões de Coordenação Regional (CCDR) with training and capacity building for implementation Diretiva INSPIRE Directive implementation)
- Actions launched with eGovernment and Academia (University and modernisation of public administration) **[Coherence]**
- SWOT analysis done by network of NFPs, the entities responsible for the production of data and information regarding the themes of the Annexes.
- Inclusion of INSPIRE into the activities of eGovernment. **[EU-added value]**
- **Increased involvement of global GI community in INSPIRE dissemination activities (INSPIRE GWF 2015, JIIDE 2014).**
- **Articulation of SNIG with thematic and regional SDIs.**

1.2 Functioning and coordination of the infrastructure

- Creation in 2014 and development of the national Open Data Portal iGEO (Ministry of Environment). **[Effectiveness]**
- National catalogue for better use of the national geoportal (<http://snig.dgterritorio.pt>) which usability was improved in general.
- Less than half national view and download services are available at the EU geoportal, to improve it a new filter was developed to connect with the geoportal using key words e.g. "INSPIRECORE"
- Support for improvement of MD quality based on usage of INSPIRE.
- Number of datasets and MD increased but the number of services not so much.
- A considerable investment in the production of services was launched in 2015.
- The principles of the INSPIRE Directive have become an integral part of national strategies for managing spatial data, their use and linking with other national data. **[Relevance]**

1.3 Usage of the infrastructure for spatial information

- Increment of the integration/relation with several regional thematic issues.
- Modernisation of regional public administration.
- Implementation of the Vision SNIG 2020 and Action Plan SNIG2020
- The public use of spatial data services and spatial data themselves has increased in 2014- results of public consultation. **[Efficiency]**
- Participation at European projects eEnvplus, SmartopenData, HELM, EAGLE6, OneGeology-Europe **[EU-added value]**.
- Cross-border projects OTALEX I and II, and GeoOTALEX (INTERREG).
- A practical example of cross-border cooperation is being carried in the scope of flood protection with neighbouring countries. **[EU-added value]**.

1.4 Data Sharing Arrangements

- Survey to the institutions on existing data policies, use conditions and category of users, if applicable; several agreements and protocols exist; detailed study initiated and should be concluded in 2016 (partial in report).
- License "Creative Commons" is in use by several institutions.
- To facilitate sharing, at governmental level was created the iGEO open data portal (Ministry of Environment). **[Effectiveness]**
- DGT is preparing a simplified license model for data sharing, ready in 2016.
- Communication/promotion actions on best practices for data sharing policy and guidelines for production addressed to the managing authorities responsible for production of spatial data and information.

1.5 Costs and Benefits

- Diversity and heterogeneity on costs among public admin for set-up, implementation, conformity test of each component- MD, data interoperability, services, coordination and horizontal measures; cost of maintenance are more homogeneous. Study going on of cost values obtained so far to make comparable and coherent values in future.
- Need for financing sources to support, an increased effort must be done to identify them.
- Not yet possible to present quantitative benefits.
- INSPIRE has an important role in the development/use of open data policy which national geoportal exist for the public admin. **[Relevance]**
- Benefits on access / share documented quality data between public admin at all levels and across sectors, including civil protection, and now incremented with Universities, private sector & citizens. **[Efficiency]**

2 Key Facts and Figures

In addition to the above mentioned issues, the implementation of INSPIRE Directive requires Member States to take four main steps in relation to management of spatial datasets which fall under the Directive:

- Step 1: Identify spatial datasets
- Step 2: Document these datasets (metadata)
- Step 3: Provide services for identified spatial datasets (discovery, view, download)
- Step 4: Make spatial datasets interoperable by aligning them with the common data models.

The key facts and figures presented in this country fiche are based on the information provided by Portugal on the [INSPIRE dashboard](#). **The provided statistics is not reflecting the data available on [INSPIRE geoportal](#).** The INSPIRE geoportal is updated on a regular and ongoing basis, whilst the INSPIRE dashboard is typically updated after every reporting round, on a yearly basis.

The conformity of the implementation is assessed against the full set of legal specifications set out by the Directive and the Implementing Rules and the commonly agreed good practices set out by the technical guidelines.

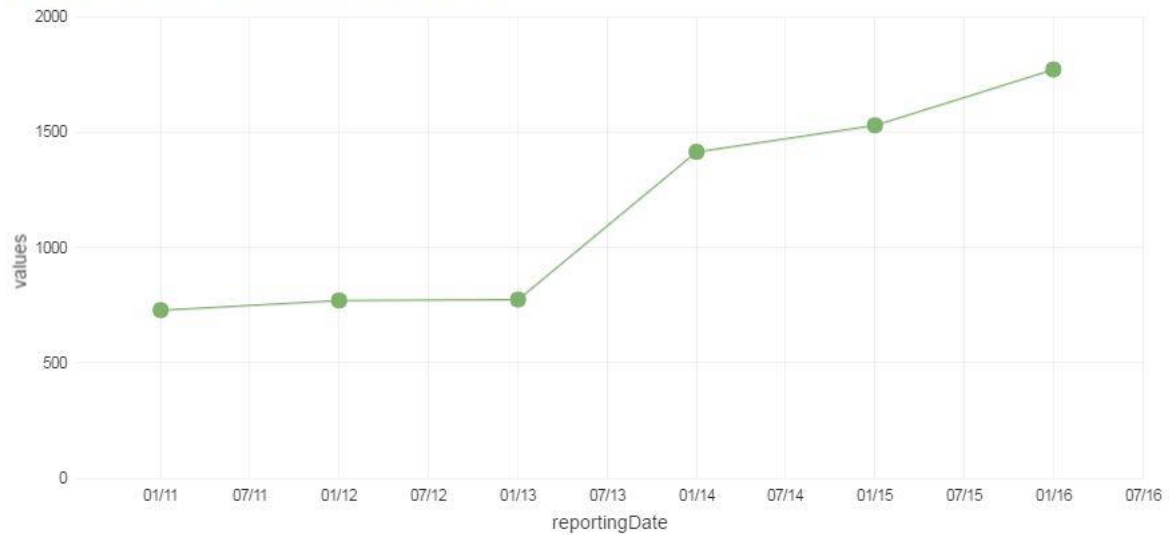
2.1. Identification of spatial data with relevance to the environment (step 1)

a. Evolution of the data offering

DSv_Num: number of spatial data sets for all Annexes

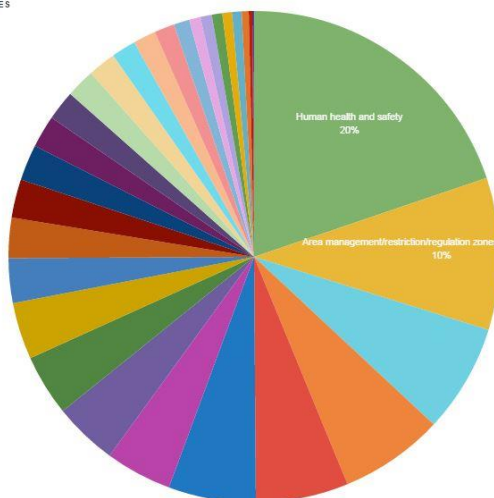
NUMBER OF SPATIAL DATA SETS FOR ALL ANNEXES (DSV_NUM)

(6) indicatorValue values per 1y | (6 Hits) | Time correction: browser



b. Data sets made available per INSPIRE theme in 2015

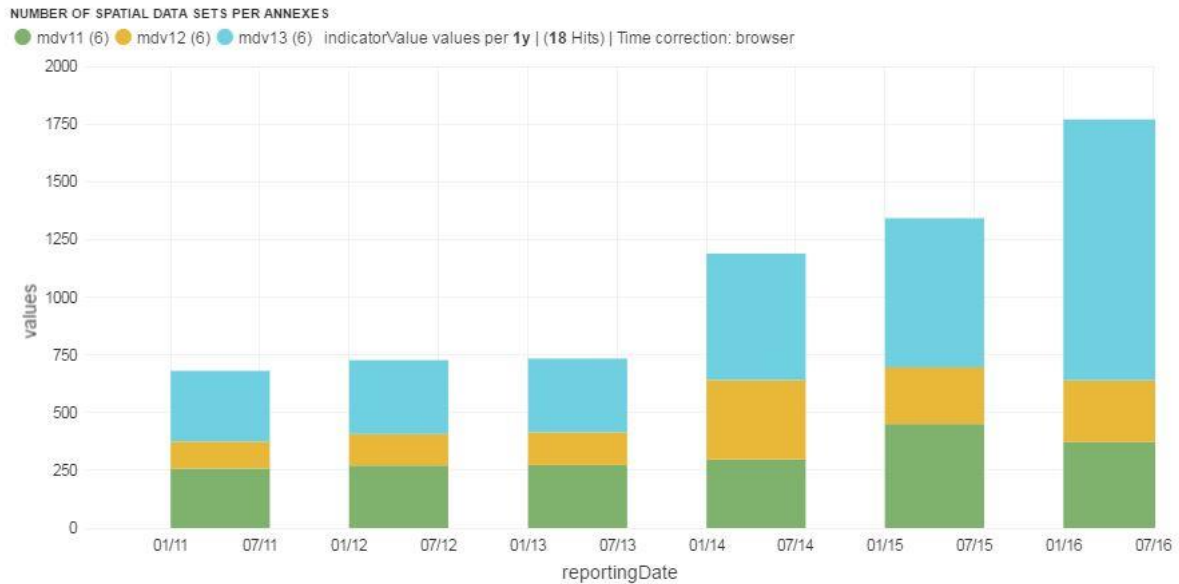
NUMBER OF RECORD PER THEMES



Human health and safety	344
Area management/restriction/regulation zones and reporting units	174
Protected sites	124
Utility and governmental services	119
Atmospheric conditions	108
Geology	100
Land cover	76
Transport networks	73
Land use	70
Hydrography	65
Elevation	51
Coordinate reference systems	46
Statistical units	44
Orthoimagery	41
Buildings	37
Environmental monitoring facilities	34
Mineral resources	33
Meteorological geographical features	32
Production and industrial facilities	28
Natural risk zones	26
Geographical names	23
Geographical grid systems	18
Soil	13
Oceanographic geographical features	13
Habitats and biotopes	12
Species distribution	11
Administrative units	11
Cadastral parcels	8
Addresses	4
Energy resources	1
Agricultural and aquaculture facilities	1

c. Data sets per annex (Annex 1 & 2: spatial reference data; Annex 3: environmental spatial data)

MDv1.1 (green): number of spatial data sets for Annex I that have metadata
 MDv1.2 (yellow): number of spatial data sets for Annex II that have metadata
 MDv1.3 (blue): number of spatial data sets for Annex III that have metadata



Evaluation of progress for step 1:

Portugal has identified a total of 1771 spatial data sets with relation to the themes listed in the INSPIRE annexes.

Additional spatial data sets have been identified since 2013, mainly under Annex III data themes. A lot of relevant spatial data sets have already been identified for the different data themes. Further improvement is expected by identifying and documenting spatial data sets required under the existing reporting and monitoring regulations of EU environmental law.

2.2 Documentation of the data (metadata) (step 2)

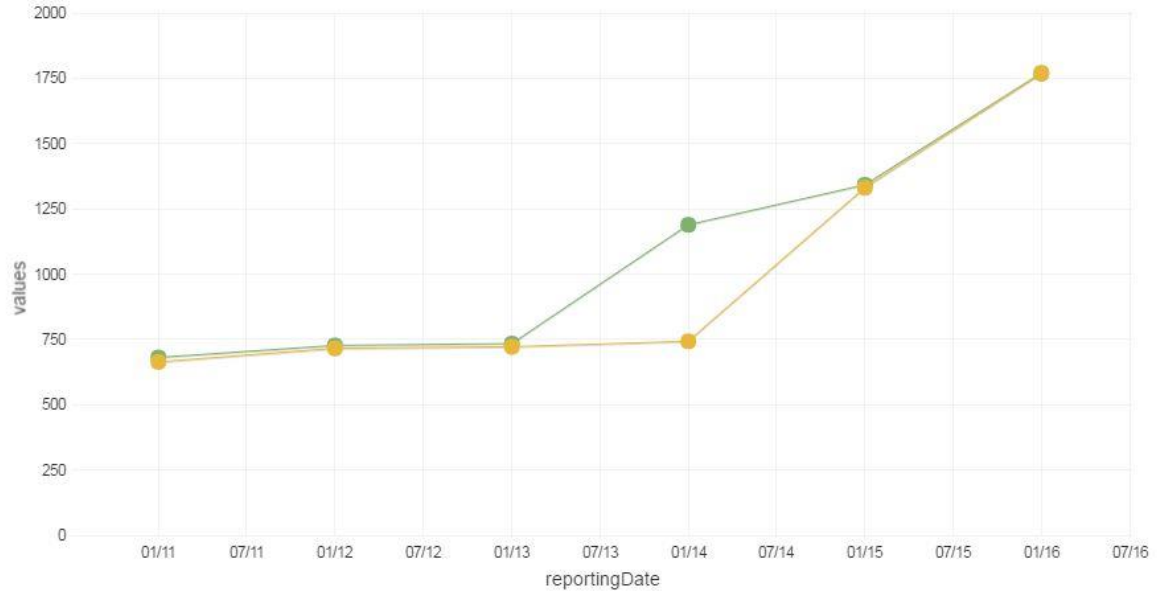
a. Evolution of documented data and conformity of the documentation

MDv1_DS (green): number of spatial data sets for all Annexes that have metadata

MDv2_DS (yellow): number of spatial data sets for all Annexes that have conformant metadata

NUMBER OF SPATIAL DATA SET THAT HAVE METADATA (MDV1_DS) AND HAVE CONFORMANT METADATA (MDV2_DS)

● mdv1_ds (6) ● mdv2_ds (6) indicatorValue values per 1y | (12 Hits) | Time correction: browser



b. Documented data per annex in 2015

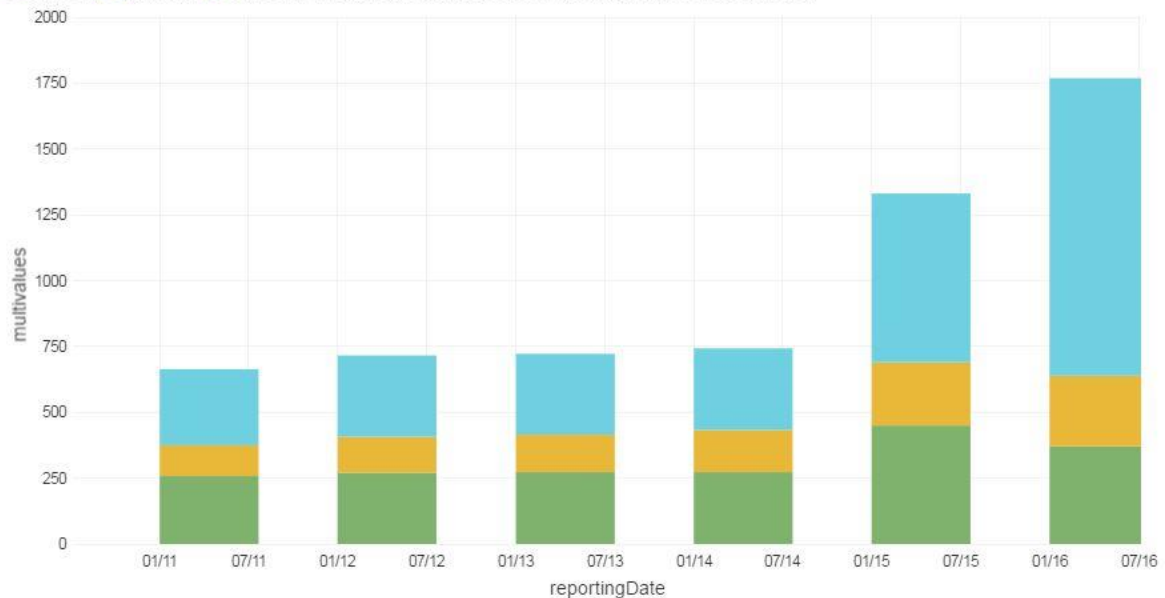
MDv2.1 (green): number of spatial data sets for Annex I that have conformant metadata

MDv2.2 (yellow): number of spatial data sets for Annex II that have conformant metadata

MDv2.3 (blue): number of spatial data sets for Annex III that have conformant metadata

NUMBER OF SPATIAL DATA SETS THAT HAVE CONFORMANT METADATA PER ANNEXES

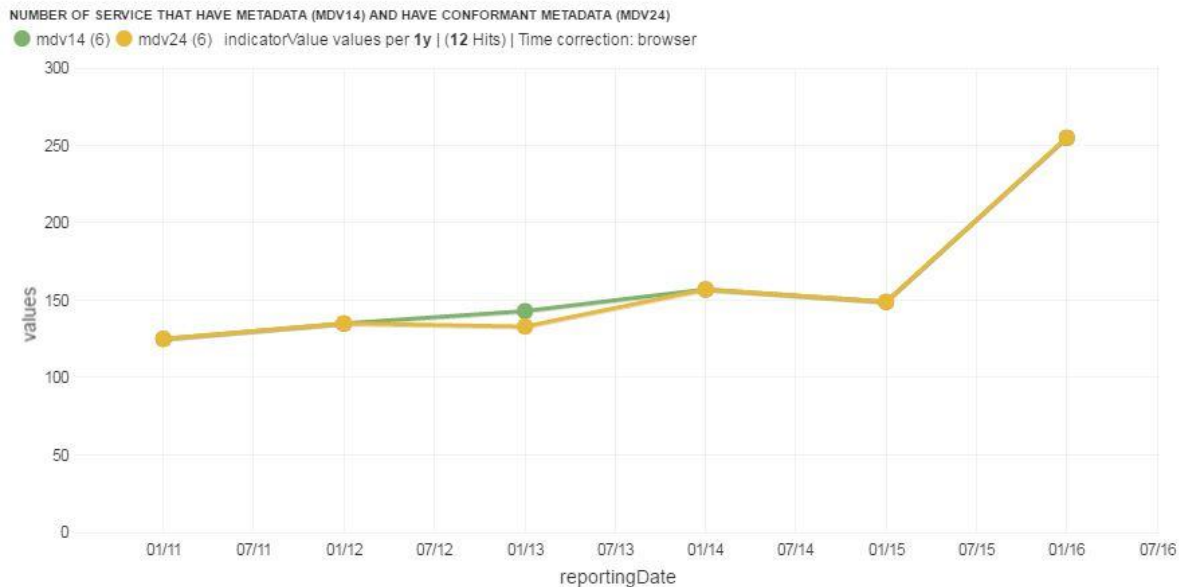
● mdv21 (6) ● mdv22 (6) ● mdv23 (6) indicatorValue multivalues per 1y | (18 Hits) | Time correction: browser



c. Evolution of documented services and conformity of the documentation

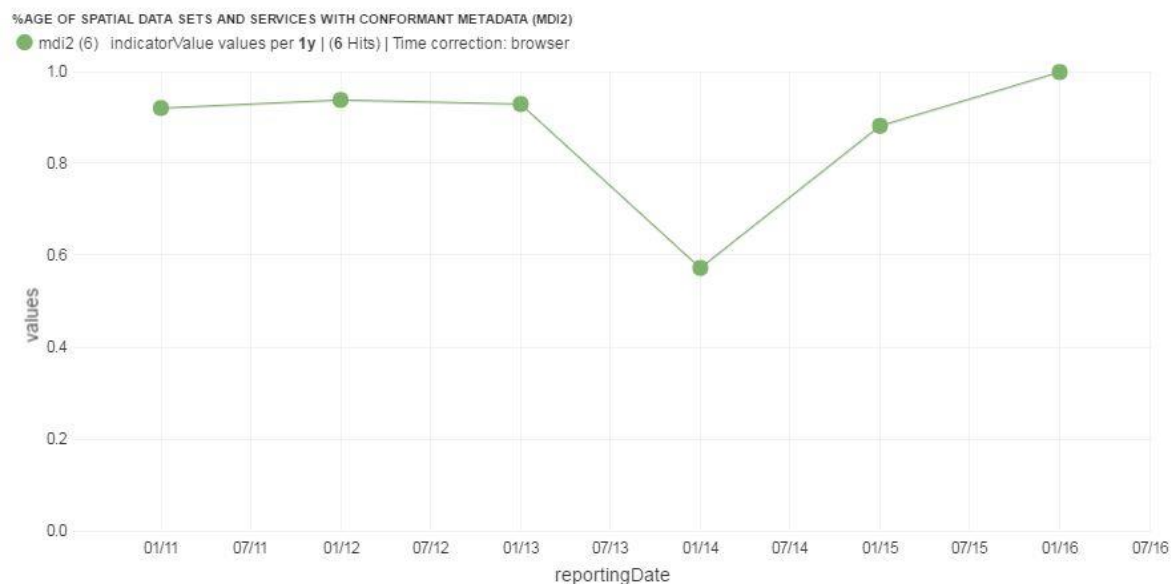
MDv1.4 (green): number of spatial data services that have metadata

MDv2.4 (yellow): number of spatial data services that have conformant metadata



d. Evolution of the overall conformity of the documented metadata

$MDi2 = \frac{\text{number of spatial data sets for all Annexes that have conformant metadata} + \text{number of spatial data services that have conformant metadata}}{\text{number of spatial data sets for all Annexes} + \text{number of spatial data services}}$



Evaluation of progress for step 2:

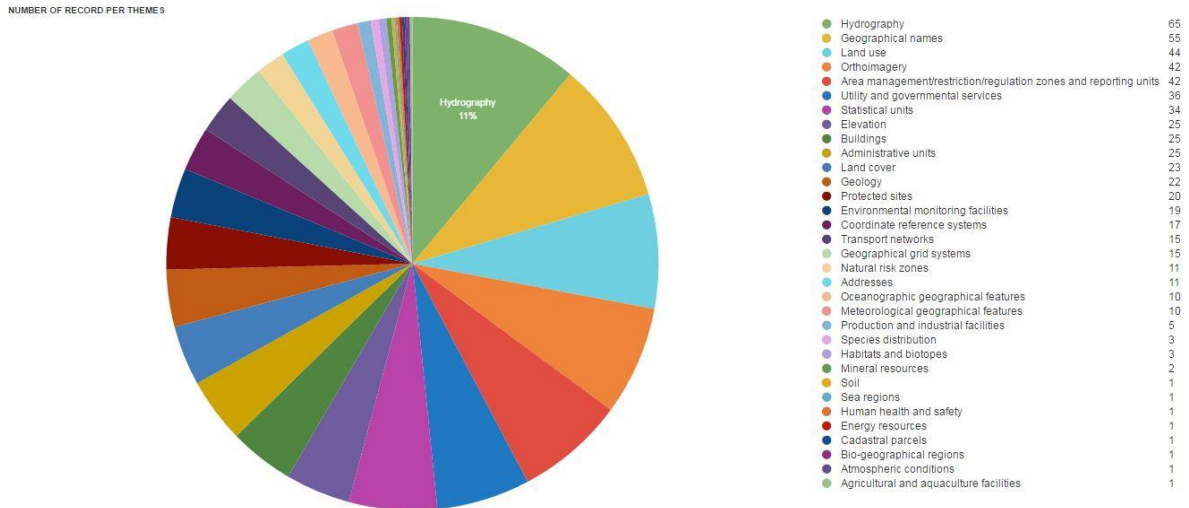
Portugal has documented and published metadata through a digital discovery service for 99,9% (1770 out of 1771) of the identified spatial data sets and 100% of the digital services. Overall, 99,9% of the Portugal metadata conforms to the INSPIRE metadata specifications.

It shows a very high level of maturity.

2.3. Accessibility of the data through digital services (step 3)

a. Digitally accessible spatial data per INSPIRE theme in 2015

Note: This figure reflects the amount of spatial data sets made available through a digital service, not the amount of available digital services. A digital service can make several spatial data sets available.



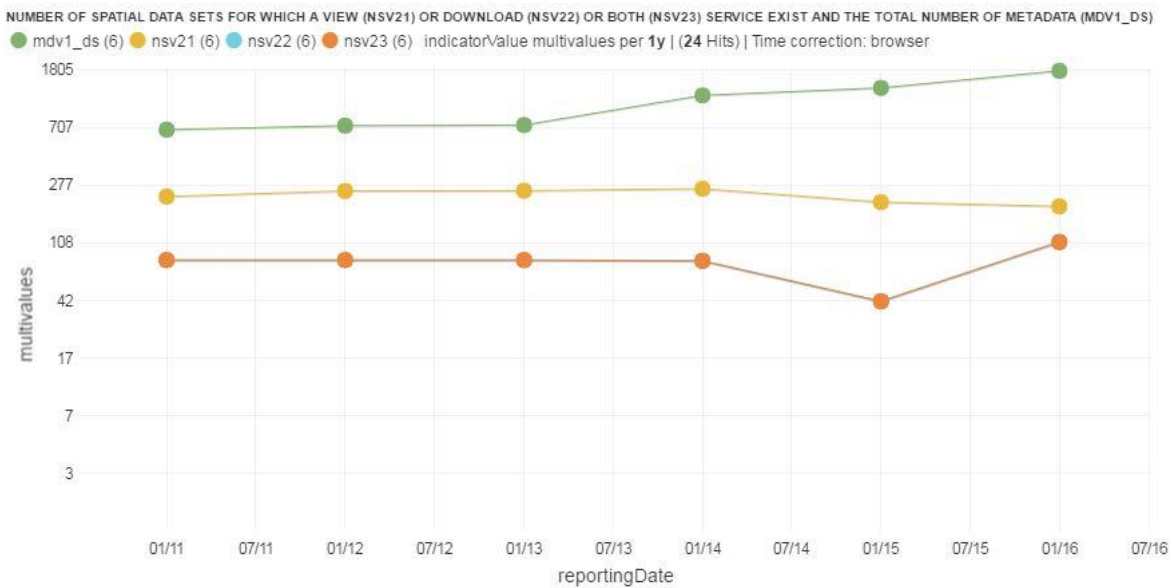
b. Evolution of spatial data made accessible through digital services

MDv1_DS (green): number of spatial data sets for all Annexes that have metadata

NSv2.1 (yellow): number of spatial data sets for which a view service exists

NSv2.2 (blue): number of spatial data sets for which a download service exists

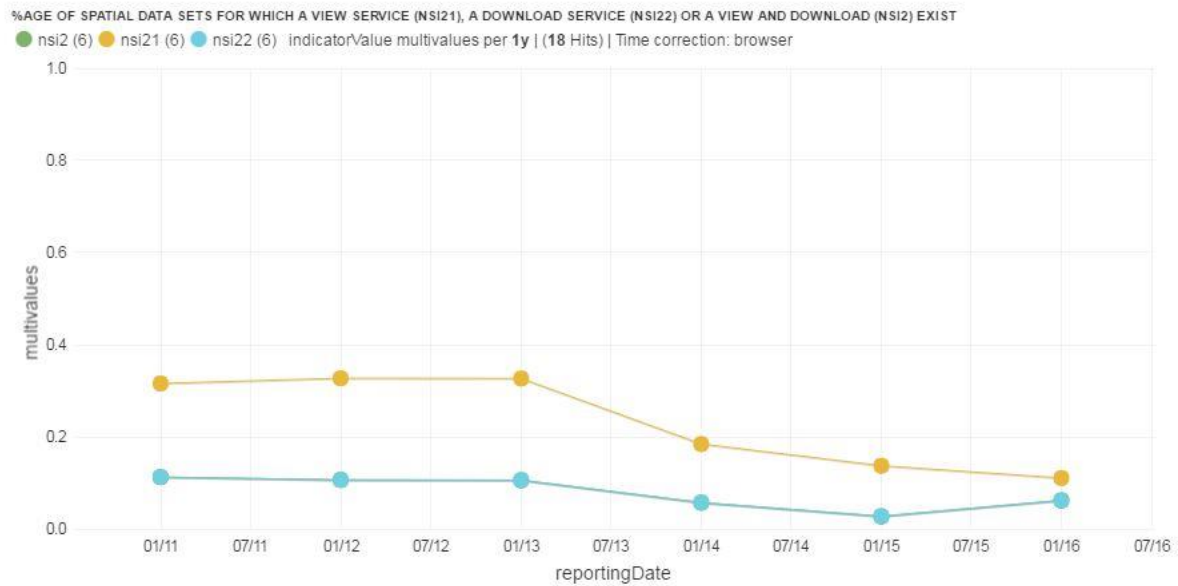
NSv2.3 (orange): number of spatial data sets for which both a view and a download service exists



NSi2 (green) = number of spatial data sets for which both a view and a download service exists / number of spatial data sets for all Annexes

NSi2.1 (yellow) = number of spatial data sets for which a view service exists / number of spatial data sets for all Annexes

NSi2.2 (blue) = number of spatial data sets for which a download service exists / number of spatial data sets for all Annexes



c. Evolution of the conformity of the digital services

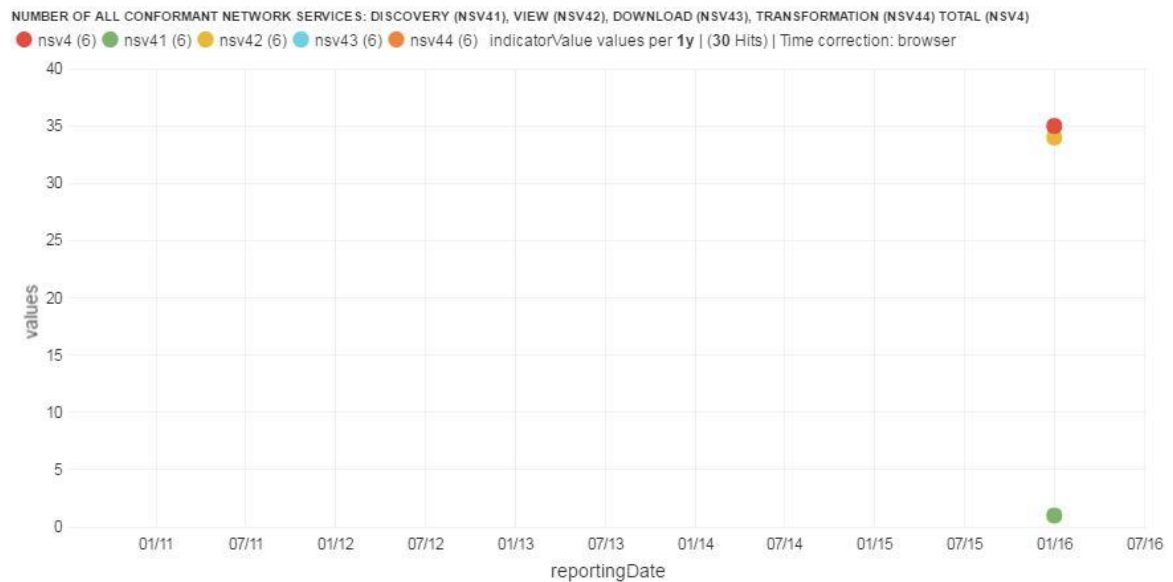
NSv4 (red): number of all conformant network services

NSv4.1 (green): number of conformant discovery network services

NSv4.2 (yellow): number of conformant view network services

NSv4.3 (blue): number of conformant download network services

NSv4.4 (orange): number of conformant transformation network services



Evaluation of progress for step 3:

Portugal has:

- 11,07% of its data sets accessible for viewing through a view service;
- 6,21% of its data sets accessible for download through a download service.

Small number of the available digital services are conform to the INSPIRE network service specifications (13,73 %).

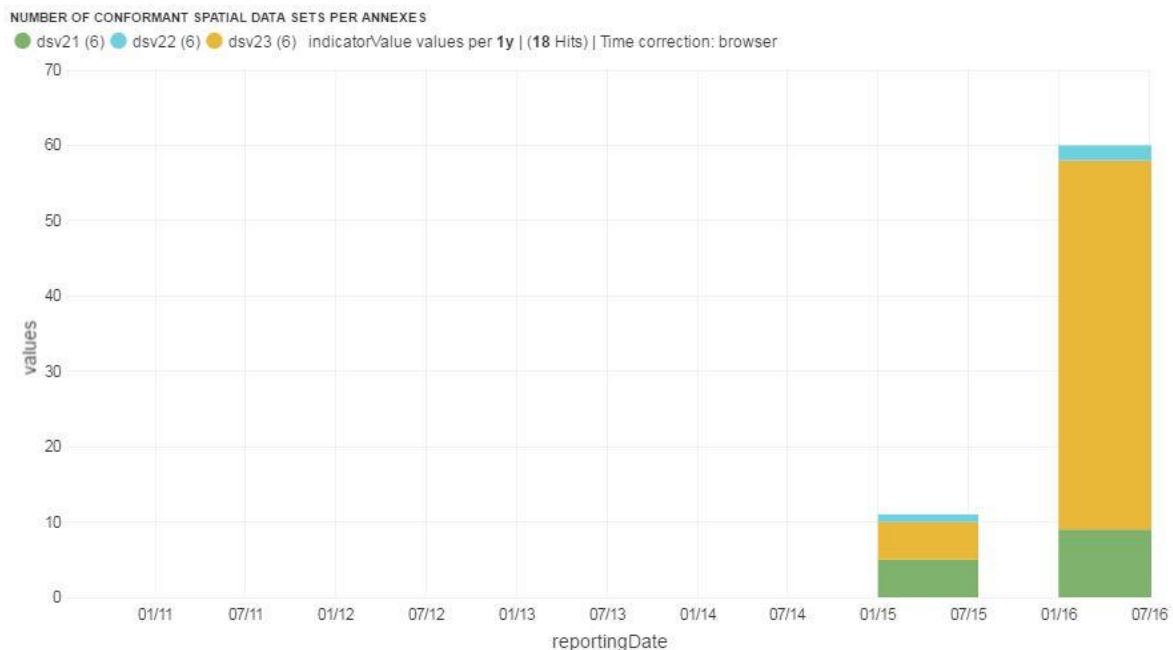
Portugal shows that it has built the necessary capacity and competences to make data accessible through digital INSPIRE network services. The technical conformity of the available services with the INSPIRE network service specifications is poor. Portugal should boost their effort to further improve the accessibility of their spatial data through digital INSPIRE services.

2.4. Interoperability of spatial data sets (step 4)

The interoperability of spatial data sets is an outlook on the readiness of Member States to make their spatial data interoperable according to the interoperability specifications laid down in the INSPIRE interoperability implementing regulation ([Commission Regulation \(EU\) No 1089/2010](#)). The deadlines for implementation of the spatial data interoperability are in the future: 23/11/2017 for Annex I data and 21/10/2020 for Annex II and III data.

a. Evolution of the conformity with INSPIRE interoperability specifications for spatial data

DSv2.1 (green): number of conformant spatial data sets with conformant metadata for Annex I
DSv2.2 (blue): number of conformant spatial data sets with conformant metadata for Annex II
DSv2.3 (yellow): number of conformant spatial data sets with conformant metadata for Annex III



Evaluation of progress for step 4:

Portugal reported 60 data set to be conform to the INSPIRE interoperability specifications in 2015.

We can conclude that Portugal started its preparations for the 2017/2020 data interoperability deadlines. Big progress could be seen in period 2015 to 2016.

3. Outlook

Portugal has critically reviewed their INSPIRE implementation and provided an [action plan](#) in 2016 to remediate existing implementation issues and further improve the overall conformity of the implementation.

Action Plan is a contribute to SNIG2020, aligned with the vision for the National Infrastructure of Geographic Information and the National System for geographic Information 2020. It includes 2 types of activities- transversal and institutional.

The following actions are set up to directly address previously identified issues:

a. Coordination (1.1; 1.2)

- **Organisation and coordination of INSPIRE implementation**
- **Management and development of SNIG and iGEO**

b. Data sharing and exchange (1.4)

- **Sharing and reuse of good practices**

c. Metadata (2.2)

- **Better process to harvest the national catalogue of MD for the EU INSPIRE geoportal**

d. Network services (2.3)

- **Specific to each institution with responsibilities to implement INSPIRE, targeted to fill the gaps.** Deadline to conclude the production and the conformity tests of MD, services and data interoperability.

e. Data Interoperability (2.4)

- **Specific to each institution with responsibilities to implement INSPIRE, targeted to fill the gaps.** Deadline to conclude the production and the conformity tests of MD, services and data interoperability.

4. Summary - How is Country doing?

INSPIRE key obligation	Overall implementation status and trend	Outlook	<p align="center">Dashboard Legend</p> <p>Implementation Status:</p> <p>😊: implementation of this provision is well advanced or (nearly) completed. Outstanding issues are minor and can be addressed easily.</p> <p>😐: implementation of this provision has started and made some progress but is still far from being complete. Outstanding issues are significant and need to be addressed to ensure that the objectives of the legislation can still be reached by 2020.</p> <p>😞: implementation of this provision is falling significantly behind or has not even started. Serious efforts are necessary to close implementation gap.</p> <p>Trend:</p> <p>↗️: the trend of the implementation is positive.</p> <p>→️: the trend of the implementation is neutral.</p> <p>↘️: the trend of the implementation is negative.</p> <p>Outlook:</p> <p>🟢: clear and targeted actions have been identified which allow reaching the objectives of the legislation in an effective way.</p> <p>🟡: No real progress has been made in the recent past or actions which have been identified are not clear and targeted enough to predict a more positive outlook.</p> <p>🔴: no actions have been identified to overcome identified implementation gaps.</p>
Ensure effective coordination	😊 ↗️	🟢	
Data sharing without obstacles	😊 ↗️	🟢	
Step 1: Identify spatial datasets	😊 ↗️	🟢	
Step 2: Document datasets (metadata)	😊 ↗️	🟢	
Step 3: Provide services for identified spatial datasets (discovery, view, download)	😞 →️	🟡	
Step 4: Make spatial datasets interoperable by aligning them with the common data models.	😐 ↗️	🟢	

Specific recommendations:

For each Member State, the accessibility of environmental data (based on what the INSPIRE Directive envisages) as well as data-sharing policies have been systematically reviewed.

Portugal has indicated in the 3-yearly INSPIRE implementation report that the necessary data-sharing policies allowing access and use of spatial data by national administrations, other Member States' administrations and EU institutions without procedural obstacles are available but not fully implemented. Portugal has no common data-sharing policy and several licenses are being used to regulate the access and use to spatial information. In many cases fees are applied. Portugal has expressed the ambition to work on a simplified data-sharing policy promoting the free access to and use of public sector spatial data. The need for recoverability of investments in data acquisition and management in many public administrations is the biggest bottleneck to address on the way to open data.

Assessments of monitoring reports issued by Portugal and the spatial information that Portugal has published on the INSPIRE geoportal indicate that not all spatial information needed for the evaluation and implementation of EU environmental law has been made available or is accessible. The larger part of this missing spatial information consists of the environmental data required to be made available under the existing reporting and monitoring regulations of EU environmental law. The new Single Environment Permit (SEP) scheme could help to strengthen the transparency and responsibility of business owners and other intervening bodies by organising and standardising all the environmental information applicable to an establishment or activity.

Suggested action

- Critically review the effectiveness of its data policies and amend them, taking 'best practices' into consideration.
- Identify and document all spatial data sets required for the implementation of environmental law, and make the data and documentation at least accessible 'as is' to other public authorities and the public through the digital services foreseen in the INSPIRE Directive.